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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,861	12/29/2000	Harold E. Boesch JR.	ARL 99-68	7450

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EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/749,861	BOESCH ET AL.	
	Examiner	Art Unit	
	Lun-See Lao	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21* is/are allowed.

6)☒ Claim(s) *22-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is response to the amendment filed on 10-21-2005. Claims 1-20 have been cancelled and claim 21 has been amended and claims 22-32 have been added. Claims 21-32 are pending.

Claim Objections

2. Claims 23-25 are objected to because of the following informalities: claims 23-25 recited " A method according to claim 1" on line 1, which appears to be--- A method according to claim 22---. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 22-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Schuman (US PAT. 3,990,069).

Consider claim 22, Schuman teaches that a method for subjecting a test subject to an acoustical field comprising:

supplying a chamber (see fig6. (42)) encompassing an input volume and having an inlet;

supplying another chamber (43) encompassing a test volume;

interconnecting said chamber to said anther chamber with a tuning port (45) which forms a Helmholtz resonator interconnecting said input volume(42) to said test volume (43);

positioning the test subject (43) with in said test volume (see col. 14 line 1-col. 15 line 46); and

applying a periodic acoustic signal from an acoustic energy source (such as a fan, (16-17) into said input volume through said inlet to establish an acoustic field in said input volume (see col. 12 line 28-col. 13 line 46);

coupling the acoustic field in said input volume (42) to the test volume (43) of said another chamber (43) through the tuning port (45) which forms a Helmholtz resonator whereby a test subject (46) in said test volume (43) is subjected to a periodic acoustical field with the test volume is isolated from the acoustic energy source (see col. 14 line 1-col. 15 line 46).

Consider claims 23-25, Schuman teaches that exhausting air from said input volume to the exterior of said chamber through a high acoustic mass unit (see fig.6 (16-17 and col. 14 line 1-col. 15 line 46); and physically adjusting said tuning port to tune the acoustic field in said test volume (see fig.6 (45) and col.. 14 line 1-col. 15 line 46); and said acoustic energy source provides a source flow of one of air and gas; and further including the step of: modulating the source flow (see fig.6 (19, control box) and col. 8 lines 17-35).

another chamber (43) encompassing a test volume;

a tuning port (45) interconnecting said chamber (42) to said another chamber (43) to form a

Helmholtz resonator (41) interconnecting said input volume (42) to said test volume (43); and acoustic energy source (16-17) for providing a periodic acoustic signal into said input volume through said inlet whereby a test subject (46) in said test volume (43) is subjected to a periodic acoustical field while the test volume is isolated from the acoustic energy source (see fig.6 (16-17) and col. 14 line 1-col. 15 line 46).

Consider claims 27-29, Schuman teaches that that Helmholtz resonator is tuned to amplify the intensity of the acoustic field in said test volume to thereby subject the test subject to a high intensity acoustic field (see col. 10 line 43-col. 11 line 4); and the tuning port (see fig.6, 45) has a variable geometry for setting the tuning of the Helmholtz Resonator (41 and see col. 11 line 45-col. 12 line 27); and said chamber has outlet; and further including an exhaust means having a high acoustic mass (see fig.6 (16-17)) at said outlet for exhausting air from said input volume (42) to the chamber exterior (see fig.6 (43) and col. 14 line 1-col. 15 line 46).

Consider claims 30-32, Schuman teaches that said exhaust means (see fig.6 (45)) is an elongate, small-aperture duct proportioned to only pass acoustic energy at frequencies below the frequency of said acoustic energy source (see fig.6 (45) and col. 14 line 1-col. 15 line 46); and said acoustical energy source (see fig. (16-17)) provides a compressed air flow; and further including a flow modulator (19) for regulating the flow into the input volume of said chamber (see fig.6 (42) and col. 14 line 1-col. 15 line 46);

and said another chamber (see fig.6(43)) further includes a low-volume positive-pressure ventilating air input having a high acoustic mass(see fig.6 (16-17) and col. 14 line 1-col. 15 line 46).

Allowable Subject Matter

5. Claim 21 is allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 21-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harold (US PAT 3,550,720) are cited to show other related high intensity infrasonic tunable resonant acoustic test cell.

9. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See L.S.
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501

HUYEN LE
PRIMARY EXAMINER